

PREPARATION OF CIGS-BASED SOLAR CELLS USING A BUFFERED ELECTRODEPOSITION BATH

ABSTRACT

A photovoltaic cell exhibiting an overall conversion efficiency of at least 9.0% is prepared from a copper-indium-gallium-diselenide thin film. The thin film is prepared by simultaneously electroplating copper, indium, gallium, and selenium onto a substrate using a buffered electro-deposition bath. The electrodeposition is followed by adding indium to adjust the final stoichiometry of the thin film.